



doi 10.5281/zenodo.13884198

Vol. 07 Issue 09 Sept - 2024

Manuscript ID: #01581

ORGANIZATIONAL AMBIDEXTERITY AND AGILITY OF MANUFACTURING FIRMS IN RIVERS STATE, NIGERIA

By Wegwu, Macaulay Enyindah

Department of Management, Faculty of Management Sciences, University of Port Harcourt

Abstract:

The study investigates the relationship between organizational ambidexterity and agility of manufacturing firms in Rivers State, Nigeria. The ability of an organisation to swiftly adapt to changes in the environment, respond to customers' needs, innovate continuously, has been a contending issue to manufacturing firms on how to navigate the complexities of the current business operations. This problem necessitated this research project that enabled theunravelling of the influence of ambidexterity with respect to exploitation of existing capabilities and exploration of new opportunities in a dynamic business environment. Some research questions and hypotheses were advanced. The cross-sectional survey was used and a population of 389 managers and supervisors from 16 manufacturing firms was studied. A sample size of 191 managers and supervisors were drawn using Krejcie and Morgan (1970) Table. The simple random sampling technique was employed and structured copies of questionnaire was utilized in gathering data for the study, with response rate measured on a 4-point Likert scale. Data generated were analysed using Spearman Rank Order Correlation Coefficient. The findings revealed a correlation between the dimensions of ambidexterity(exploitation and exploitation) and the agility of the manufacturing firms. The study concluded that a relationship exists between ambidexterity and the agility of manufacturing firms in Rivers State. The study therefore recommends that for manufacturing firms to swiftly adapt to the complexities of business environment, respond to customers' needs, and innovate continuously, these firms in Rivers State shouldbe more committed to exploration of new opportunities and exploitation of existing capabilities in order to be competitively advantageous in the dynamic business environment.

Keywords:

Organisational Ambidexterity, Exploration, Exploitation, Agility, Alertness and Responsive to the Capability.



Page 01 of 15

Introduction

Organizational agility has become a critical attribute for manufacturing firms, particularly in an era marked by rapid technological advancements, fluctuating market demands, and intense global competition. Agility refers to the ability of an organization to swiftly adapt to changes in the environment, respond to customer needs, and innovate continuously. This capability is essential for manufacturing firms to navigate the complexities of today's business landscape. Enhanced responsiveness to market changes is a significant benefit of organizational agility. Agility allows manufacturing firms to quickly adapt to shifts in market demand, regulatory changes, and emerging trends, ensuring they remain competitive and relevant. This responsiveness helps firms avoid obsolescence and capitalize on new opportunities as they arise, maintaining their market position and driving growth (Dove, 2022).

Agility results in improved customer satisfaction. Agile firms can respond rapidly to customer feedback and changing preferences, ensuring that their products meet current market expectations. This ability to quickly align products and services with customer needs leads to higher satisfaction and loyalty, as firms can effectively tailor their offerings to meet evolving demands (Yusuf et al., 2021), likewise an agile manufacturing firms foster a culture of continuous improvement and innovation, allowing them to develop new products and processes more efficiently. This constant drive for innovation helps maintain a competitive edge, as firms can introduce new solutions and improve existing ones to stay ahead of competitors (Sherehiy& Karwowski, 2020).

Operational efficiency is also significantly enhanced through agility. Agile firms can streamline processes, reduce waste, and improve production cycles by quickly reconfiguring operations in response to changes. This efficiency leads to cost savings and improved profitability, making agile firms more resilient and capable of sustaining long-term growth (Teece, 2022). Effective risk management is another vital aspect of agility. In a volatile global market, agile firms are better equipped to anticipate potential disruptions, respond to unforeseen events, and mitigate risks. This resilience ensures business continuity and stability, even in the face of challenges such as supply chain disruptions or economic downturns (Dyer & Ericksen, 2021). Moreover, agility provides a significant competitive advantage by enabling firms to outpace competitors in adapting to market changes and innovating new solutions. Agile firms can pivot quickly in response to opportunities or threats, making them more likely to succeed in dynamic and uncertain environments (Doz& Kosonen, 2021).

Organizational agility positively impacts employee engagement and morale. Agile organizations often promote a dynamic and engaging work environment where employees are empowered to make decisions, contribute ideas, and participate in continuous improvement efforts. This empowerment leads to higher levels of job satisfaction and motivation, as employees feel valued and integral to the firm's success (Briody et al., 2022). However, in the contemporary business landscape, the ability to balance exploitation of existing capabilities while exploring new opportunities, known as organizational ambidexterity, has become a crucial determinant of success. This dual capability allows firms to adapt and thrive amidst rapidly changing market conditions. In parallel, organizational agility, which refers to a firm's capacity to swiftly respond to environmental changes and customer demands, has emerged as a vital competitive advantage. This study focuses on the intersection of these two concepts within the manufacturing sector of Rivers State, Nigeria.

Rivers State, a pivotal industrial hub in Nigeria, is home to a diverse array of manufacturing firms that significantly contribute to the region's economic development. These firms operate in a challenging

environment characterized by fluctuating economic policies, infrastructural deficits, and dynamic market demands. To navigate these challenges effectively, manufacturing firms in Rivers State must develop both ambidextrous and agile capabilities (Adeniran & Aremu, 2021). Organizational ambidexterity involves managing the paradox of exploiting current competencies to achieve short-term performance while exploring new avenues for long-term growth. This balancing act is particularly pertinent in the manufacturing sector, where technological advancements and shifting consumer preferences demand continuous innovation alongside operational efficiency (Teece et al., 2022). On the other hand, organizational agility encompasses the ability to anticipate changes, make rapid decisions, and reconfigure resources promptly to seize emerging opportunities or mitigate threats (Tallon et al., 2023; (Omotayo et al., 2020).).

This study aims to investigate the extent to which manufacturing firms in Rivers State exhibit organizational ambidexterity and agility, and how these capabilities influence their overall performance. By examining the strategies, structures, and processes that underpin these capabilities, the research seeks to provide insights into the best practices that can enhance the competitive edge of manufacturing firms in the region (Osabutey & Jin, 2022). Understanding the interplay between organizational ambidexterity and agility is not only relevant for academic discourse but also for practical applications. Manufacturing firms in Rivers State can leverage these insights to bolster their resilience and adaptability, thereby ensuring sustained growth and competitiveness in an ever-evolving industrial landscape.

Statement of The Problem

Manufacturing firms face numerous challenges in achieving and maintaining agility, which is essential for navigating the dynamic business landscape. Market uncertainty poses a significant obstacle. Fluctuations in demand, availability of raw materials, and changes in regulations create an unpredictable environment, making it difficult for firms to plan and respond effectively to market shifts (Johnston et al., 2023). Supply chain disruptions, also frequently disrupt manufacturing operations. Events such as natural disasters, geopolitical tensions, and global pandemics can lead to delays, shortages, and increased costs, highlighting the vulnerability of global supply chains and the need for resilience (Li & Ai, 2021).

Technological change presents both opportunities and challenges for manufacturing firms. Inadaptingto new technologies to enhance efficiency and competitiveness, requires significant investments and organisational adaptation. Firms must navigate the complexities of digitalization, automation, and artificial intelligence to remain competitive in the modern manufacturing landscape (Wu et al., 2022). Intense competition within the manufacturing sector further compounds these challenges. Firms must continuously innovate and differentiate themselves through product quality, pricing strategies, and customer service to maintain market share and profitability. Failure to do so risks losing relevance in a crowded and competitive marketplace (Chen et al., 2020).

Talent management is another critical issue for manufacturing firms. Attracting and retaining skilled employees is essential for driving innovation and sustaining operational excellence. However, talent shortages, skills mismatches, and demographic shifts pose challenges to workforce management and development (Jiang et al., 2021). Ambidexterity, the ability to balance exploitation of existing capabilities with exploration of new opportunities, is essential for manufacturing firms to thrive in dynamic environments. However, several challenges hinder the development and implementation of ambidextrous strategies.

Resource allocation dilemma arises as firms struggle to allocate resources between exploitation and exploration activities. Limited resources may be disproportionately allocated, hindering the

development of ambidextrous capabilities (Zhang et al., 2023). Organizational silos inhibit collaboration and knowledge sharing across departments and functions, impeding the integration of ambidextrous practices. Overcoming these silos requires a cultural shift towards risk-taking, experimentation, and adaptability (Raisch & Birkinshaw, 2021). Resistance to change is a common barrier to ambidexterity. Established routines and norms may breed organizational resistance, making it challenging to adopt ambidextrous behaviours and practices (He & Wei, 2020). Lack of strategic alignment undermines ambidextrous efforts.

Conflicting priorities and misalignment between short-term exploitation goals and long-term exploration objectives hinder the effective implementation of ambidextrous strategies (Wang & Huang, 2022). Measurement and evaluation challenges complicate the assessment of ambidextrous practices and their impact on firm performance. Traditional performance metrics may not capture the nuanced outcomes of ambidextrous behaviour, making it difficult to justify investments and track progress (Huang et al., 2024). Addressing the challenges related to agility and ambidexterity is crucial for manufacturing firms to thrive in today's business environment. By recognizing and mitigating these challenges, firms can enhance their adaptability, innovation capability, achieve competitive advantage, and position themselves for sustained success and growth.

Aim and Objectives of The Study

The study examined the relationship between organizational ambidexterity and agility of manufacturing firms in Rivers State. Specifically, it examined the connection between:

- 1. Exploration and alertness ofmanufacturing firms in Rivers State.
- 2. Exploration and responsive capability of manufacturing firms in Rivers State.
- 3. Exploitation and alertness of manufacturing firms in Rivers State.
- 4. Exploitation and responsive capability of manufacturing firms in Rivers State.

Research Questions

- 1. What is the relationship between exploration and alertness ofmanufacturing firms in Rivers State?
- 2. What is the association between exploration and responsive capability of manufacturing firms in Rivers State?
- 3. What is the connection between exploitation and alertness ofmanufacturing firms in Rivers State?
- 4. What is the bond between exploitation and responsive capability of manufacturing firms in Rivers State?

Research Hypotheses

Ho₁: There is no significant relationship between exploration and alertness ofmanufacturing firms in Rivers State.

Ho₂: There is no significant relationship between exploration and responsive capability of manufacturing firms in Rivers State.

Ho₃: There is no significant relationship between the exploitation and alertness of manufacturing firms in Rivers State.

Ho₄: There is no significant relationship between exploitation and responsive capability of manufacturing firms in Rivers State.

Conceptual Framework

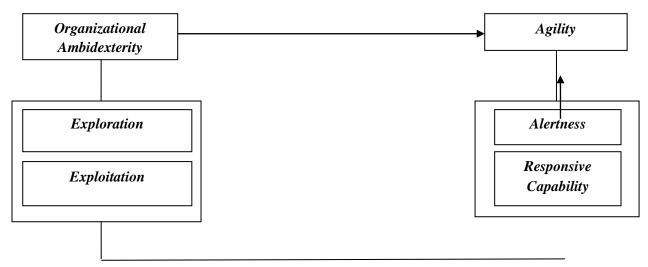


Figure 1: Conceptual framework of Organizational ambidexterity and agility of manufacturing firms in Rivers State.

Source: Researcher's conceptualisation (2024).

Literature Review

Theoretical Foundations

The Dynamic Capabilities Theory: The Dynamic Capabilities Theory, proposed by Teece, Pisano, and Shuen in 1997, explains how firms can achieve organizational ambidexterity and agility by integrating, building, and reconfiguring internal and external competences to respond to rapidly changing environments. This theory is crucial for understanding how firms can balance exploiting existing resources and exploring new opportunities, essential for maintaining agility and sustaining competitive advantage in dynamic markets.

Conceptual Review

Organizational Ambidexterity

Organizational ambidexterity, a concept developed by Michael L. Tushman and Charles A. O'Reilly III in 1996 is the ability to balance exploitation of existing capabilities with exploration of new opportunities, is crucial for firms operating in dynamic environments. This dual capability allows organizations to achieve long-term success by simultaneously improving efficiency and fostering innovation. Enhanced competitive advantage is a significant benefit of mastering ambidexterity. Firms that can swiftly adapt to market changes while optimizing their current operations often outperform their competitors. This capability enables them to innovate and introduce new products, ensuring sustained competitiveness in a rapidly evolving market (O'Reilly & Tushman, 2016). By maintaining a balance between innovation and efficiency, ambidextrous organizations can navigate the complexities of modern business landscapes effectively.

Improved innovation and efficiency are other critical outcomes of organizational ambidexterity. Ambidextrous organizations excel in both exploiting existing resources and exploring new possibilities. This balance enhances their ability to innovate without sacrificing operational efficiency, leading to improved overall performance (Birkinshaw & Gupta, 2013). Firms that can simultaneously

manage incremental improvements and breakthrough innovations can better align their strategies with changing market demands. Greater resilience is another advantage provided by organizational ambidexterity.

The ability to pursue both exploration and exploitation helps firms manage risks and uncertainties more effectively. By being adaptable and flexible, these organizations are more resilient to external shocks and market disruptions (Gibson & Birkinshaw, 2020). This resilience ensures that firms can maintain stability and continuity in the face of unforeseen challenges. Sustained growth is also supported by ambidexterity. It ensures that firms do not become obsolete due to an over-reliance on existing capabilities. Continuous exploration of new opportunities keeps firms relevant and poised for long-term success (Raisch & Birkinshaw, 2021). By fostering a culture that supports both innovative and efficient practices, firms can ensure resilience, adaptability, and sustained growth in an ever-evolving industrial landscape.

Exploration: Exploration within organizations encompasses the pursuit of innovation, new market opportunities, and novel products or services. It involves experimentation with cutting-edge technologies, entry into untapped markets, and the development of unique offerings. This process is vital for fostering innovation and sustaining long-term growth in dynamic business environments (March, 1991). Innovation and experimentation lie at the heart of exploration. Organizations engage in activities that stretch their current capabilities, leading to breakthrough innovations that confer significant competitive advantages. This proactive approach to innovation enables organizations to adapt to changing market demands and stay ahead of the competition (Tushman & O'Reilly, 1996). Market expansion is another critical aspect of exploration. By identifying and capitalizing on opportunities in emerging markets or new customer segments, organizations can broaden their reach and diversify their revenue streams. Successful market expansion requires a deep understanding of diverse market dynamics and the ability to tailor strategies to local conditions (Eisenhardt & Martin, 2000). Additionally, exploration involves the development of new products and services that address evolving customer needs. This process often necessitates substantial investment in research and development and a culture that encourages creativity and risk-taking. By continuously innovating, organizations can maintain their relevance and competitiveness in the marketplace (Helfat &Peteraf, 2003).

Acquiring new knowledge is fundamental to successful exploration. Organizations invest in learning about emerging technologies, industry trends, and best practices through partnerships, acquisitions, and internal research initiatives. Integrating this new knowledge into the organization drives innovation and facilitates continuous improvement (Cohen & Levinthal, 1990). Furthermore, organizational flexibility is crucial for effective exploration. Organizations must be able to pivot quickly in response to new information and opportunities, supported by decentralized decision-making structures and a culture that embraces change and experimentation (Garud & Karnøe, 2003). Exploration is essential for organizations seeking to drive innovation and sustain long-term growth. By fostering a culture of experimentation, investing in market expansion and new product development, acquiring new knowledge, and maintaining organizational flexibility, organizations can adapt to dynamic business environments and seize new opportunities for success.

Exploitation: Exploitation in organizational settings involves maximizing the efficiency and value of existing resources, capabilities, and knowledge to capitalize on current market opportunities. This strategy focuses on refining and optimizing current operations, products, and processes to sustain competitive advantage. Through continuous improvement efforts and incremental innovation,

organizations streamline processes, enhance productivity, and minimize costs while leveraging accumulated experience and expertise.

Efficient resource allocation ensures strategic alignment with market demands, prioritizing initiatives that maximize returns and minimize risks. Successful exploitation strikes a balance between stability and innovation, allowing organizations to adapt to evolving market conditions while maintaining operational efficiency. Exploitation entails optimizing existing capabilities and resources to extract maximum value and sustain competitiveness. By refining products, processes, and resource allocation strategies, organizations can achieve operational excellence and drive long-term success in dynamic business environments.

Agility

Agility, a multifaceted concept, refers to the ability to move quickly and easily, and is vital in various domains, including physical movement, mental adaptability, and organizational efficiency. Physically, agility involves swift and coordinated movements, which are crucial for athletes, dancers, and those in physically demanding professions. Improving physical agility typically requires exercises that enhance speed, balance, coordination, and flexibility (McArdle, Katch, & Katch, 2010). Mentally, agility is characterized by the capacity to think and understand quickly. This involves problem-solving, adaptability, and rapid decision-making, skills essential for roles requiring strategic thinking and quick responses to changing scenarios. Mental agility can be cultivated through activities that challenge cognitive abilities and encourage flexible thinking (Goldstein & Naglieri, 2011).

Organizational agility, on the other hand, pertains to an organization's ability to swiftly adapt to market changes and external pressures. This requires flexible structures, innovative thinking, and efficient decision-making processes. Organizations with high agility can respond to dynamic environments more effectively, maintaining competitiveness and driving success (Doz& Kosonen, 2008). Agility encompasses a blend of speed, adaptability, and efficiency across physical, mental, and organizational contexts. Targeted practice and training are essential to develop these skills, enabling individuals and organizations to thrive in their respective fields.

Alertness: Alertness refers to an organization's ability to promptly and accurately detect and interpret significant environmental changes, essential for leveraging current capabilities and pursuing new opportunities. Firstly, organizational alertness enhances the ability to detect and respond to market trends and shifts. Highly alert firms can quickly identify changes in customer preferences, technological advancements, and competitive actions, allowing them to adapt their strategies and operations to remain competitive (Tang et al., 2020).

Alertness also improves resource allocation, vital for ambidexterity. Organizations with high environmental awareness can make informed decisions about investing in existing products and processes (exploitation) versus innovative initiatives (exploration). This balance optimizes performance and sustains growth (Baden-Fuller & Mangematin, 2013). Moreover, alertness supports continuous learning and knowledge integration, essential for ambidextrous organizations. It allows firms to absorb new information and integrate it into their existing knowledge base, fostering innovation and improving current operations (Raisch & Birkinshaw, 2021). This cultivates a culture of agility and responsiveness.

Additionally, organizational alertness fosters strategic agility, enabling firms to pivot quickly in response to opportunities and threats. This agility is crucial in dynamic environments, where swift adaptation can differentiate between success and failure. Alert organizations can reconfigure resources and processes to capitalize on new opportunities or mitigate risks, enhancing their ambidextrous capabilities (Teece et al., 2016). Alertness enhances communication and collaboration within the organization. Leaders who stay attuned to external changes can effectively communicate

insights and strategic adjustments, ensuring alignment with the overall strategic direction and facilitating coordinated exploitation and exploration activities (Gibson & Birkinshaw, 2020).

Responsive Capability: Responsive capability is essential for organizations to thrive in dynamic environments, enabling them to quickly and effectively react to changes, opportunities, and threats. This capability involves keen awareness of market trends, customer preferences, technological advancements, and competitive actions. Organizations with strong responsive capabilities can detect changes early, interpret their implications accurately, and make timely, informed decisions (Tang et al., 2020). Agile decision-making is a hallmark of responsive capability. Organizations can swiftly reallocate resources, adjust priorities, and modify strategies to respond to external shifts, which is crucial in rapidly changing environments where delays can lead to missed opportunities or increased risks (Teece et al., 2016). This involves reconfiguring resources and capabilities to address new challenges or capitalize on emerging opportunities, ensuring they meet changing demands effectively (Baden-Fuller &Mangematin, 2013).

Continuous learning and adaptation are integral to responsive capability. Organizations regularly gather and analyze environmental information, integrating new knowledge into their operations to support innovation and maintain strategic relevance (Raisch & Birkinshaw, 2021). This ongoing learning process underpins strategic flexibility, allowing organizations to pivot and change direction as needed to explore new opportunities and respond to threats (Gibson & Birkinshaw, 2020). Effective communication and collaboration are also critical. Leaders must share relevant insights and strategic adjustments throughout the organization to ensure alignment and cohesive action. This coordinated effort enhances the organization's ability to respond swiftly and effectively to external changes, maintaining competitiveness and achieving long-term success (Teece et al., 2016).

Empirical Review

Anekwe et al., (2020) examined the impact of ambidexterity on the organizational performance of manufacturing firms, focusing specifically on the relationship between innovative ambidexterity and market share, as well as the effect of contextual ambidexterity on competitive advantage. The research was grounded in the dynamic capability theory proposed by Teece, Pisano, and Shuen (1997). A correlation survey research design was utilized, targeting a population of 386 individuals. A sample size of 196 was determined using the Taro Yamane formula. The Pearson product-moment correlation coefficient was employed to test the hypotheses. The findings revealed a significant positive relationship between innovative ambidexterity and market share (correlation coefficient = .914, N = 189, P < 0.01). Additionally, a significant positive relationship was found between contextual ambidexterity and competitive advantage (correlation coefficient = .820, N = 189, P < 0.01).

Emeanaand Onuoha (2023) investigated the relationship between structural ambidexterity and the performance of manufacturing firms in Nigeria. Utilizing a cross-sectional survey, the research targeted a population of 198 employees from manufacturing firms in Rivers State. A sample size of 132 managers and supervisors was selected for the study. Data were collected through questionnaires, employing a simple random sampling technique. The data analysis was conducted using Spearman's Rank Order Correlation. The results indicated that the dimensions of structural ambidexterity, specifically exploration and exploitation, have a significant positive relationship with productivity and goal attainment.

AmahandOnwughalu (2017) explored the relationship between ambidexterity and organizational resilience among telecommunication firms in Port Harcourt, Rivers State. A cross-sectional research

design was employed to examine four selected telecommunication firms. Forty functional unit managers from the head offices of these firms participated in the study. Data were collected through questionnaires, with all forty questionnaires retrieved and analyzed using Spearman's Rank Order Correlation Coefficient. The findings indicated that the dimensions of ambidexterity, specifically exploration and exploitation, exhibited a significant relationship with organizational resilience.

Adamuand Onuoha(2023),investigated the relationship between corporate innovation and organizational ambidexterity in manufacturing firms located in Rivers State. A cross-sectional survey design was employed, involving 215 managers and supervisors from 15 selected manufacturing firms in the region. As the study was a census study, the entire population was surveyed. Data collection was conducted using a structured questionnaire. The Spearman rank correlation was used to analyse the relationship between dimensions of corporate innovation (process innovation and market innovation) and dimensions of organizational ambidexterity (exploitation and exploration). The findings indicated a significant relationship between corporate innovation and organizational ambidexterity.

Methodology

Research Design: The cross-sectional survey was used and data generated with the use of structured copies of questionnaire which were distributed to the respondents in the chose manufacturing firms in Rivers State. The study also adopted the quasi-experimental design because of the nature of the study elements whose nature could not be controlled.

Population: A population of 389 made up of managers and supervisors from 16 manufacturing firms in Rivers State out of which 185 respondents was studied.

Sampling Technique: The sampling technique that was used in the study was the simple random sampling technique. The choice was to ensure that every member of the study element had equal chances of being selected.

Sample size determination: A sample size of 191 managers and supervisors was determined using Krejcie and Morgan (1970) table.

Method of data collection: The method of data collection adopted was through the distribution of structured copies of questionnaire.

Data Analysis:Organizational ambidexterity was operationalized using exploration and exploitation. Exploration was measured using statement item like (e.g. the firm continuously seeks out new technologies and innovative processes to stay ahead in the market), while exploitation was measured with statement item like (e.g. the company efficiently leverages its existing resources and capabilities to maximize current market performance and profitability). Agility was measured using alertness and responsive capabilityas given. Alertness was measured using statement item like(e.g.the company actively monitors industry trends and market changes to anticipate potential opportunities and threats) statement item was also used in measuring responsive capabilitylike (e.g.the organization promptly adapts its strategies and operations in response to emerging market demands and customer feedback). The responseswere measured on a 4-point Likert scale and the data were analysed using Spearman rank order correlation coefficient.

Results

4.0 Result and Discussion

From the 191 copies distributed, only 185 were well filled and retrieved. The hypotheses test is undertaken at a 95% confidence level. Hypotheses are rejected when P < 0.05 and accepted when P > 0.05 based on decision rule.

Table 1: Exploration and Agility

Correlations

			Exploration	Alertness	Responsive Capability
Spearman's rho	Exploration	Correlation Coefficient	1.000	.780**	.841**
		Sig. (2-tailed)		.000	.000
		N	185	185	185
	Alertness	Correlation Coefficient	.780**	1.000	.797**
		Sig. (2-tailed)	.000		.000
		N	185	185	185
	Responsive	Correlation Coefficient	.841**	.797**	1.000
	Capability	Sig. (2-tailed)	.000	.000	
		N	185	185	185

^{**.} Correlation is significant at the 0.01 level (2-tailed).

Exploration and Alertness: The result of the data analysis reveals that at a significant level p < 0.05 (0.000 < 0.05), rho = 0.780**. The significance level of 0.000 is less than the alpha level of 0.05. The rho value of .780 shows a positive correlation between exploration and alertness. Therefore, the null hypothesis (Ho₁) is rejected. This proposes that exploration and alertness have a strong significant positive relationship.

Exploration and Responsive Capability: The result of the data analysis reveals that at a significant level $p < 0.05 \ (0.000 < 0.05)$, rho = .841**. This means that there is a significant positive association between exploration and responsive capability. The null hypothesis, Ho₂, is rejected and the alternate accepted.

Table 2: Exploitation and Agility

Correlations

					Responsive
			Exploitation	Alertness	Capability
Spearman's rho	Exploitation	Correlation Coefficient	1.000	.656**	.677**
		Sig. (2-tailed)		.000	.000
		N	185	185	185
	Alertness	Correlation Coefficient	.656**	1.000	.797**
		Sig. (2-tailed)	.000		.000
		N	185	185	185
	Responsive	Correlation Coefficient	.677**	.797**	1.000
	Capability	Sig. (2-tailed)	.000	.000	
		N	185	185	185

^{**.} Correlation is significant at the 0.01 level (2-tailed).

Exploitation and Alertness: The result of the data analysis in table 2 reveals that at a significant level p < 0.05 (0.000 < 0.05), rho = 0.656**. The significance level of 0.000 is less than the alpha level of 0.05. The rho value of 656 shows a positive correlation between exploitation and alertness. Therefore, the null hypothesis (Ho₃) is rejected. This proposes that exploitation and alertness have a strong significant positive relationship.

Exploration and Responsive Capability: The result of the data analysis reveals that at a significant level p < 0.05 (0.000 < 0.05), rho = .677**. This means that there is a significant positive association between exploration and responsive capability. The null hypothesis, Ho₄, is rejected and the alternate accepted.

Discussion of Findings

The test of hypotheses one and two revealed that explorationis positively correlated with the agility (alertness and responsive capability) in manufacturing firms in Rivers State. The positive correlation between exploration and agility (alertness and responsive capability) in manufacturing firms in Rivers State implies that firms engaging in exploratory activities, such as seeking new opportunities and innovating, are more agile. This heightened alertness to market trends and swift adaptability to changes give these firms a competitive edge, enabling them to proactively capitalize on opportunities and mitigate risks. Thus, exploration enhances organizational learning, growth, and overall performance, contributing significantly to the firms' agility and responsiveness. This is in line withAnekwe et al., (2020) that ambidexterity correlates with organizational performance. It also agrees with Emeanand Onuoha (2023) that structural ambidexterity relates with the performance of manufacturing firms in Nigeria.

The results of testing hypotheses three showed a strong positive correlation between exploitation and agility (alertness and responsive capability) in manufacturing firms in Rivers State. The strong positive correlation between exploitation and agility (alertness and responsive capability) in manufacturing firms in Rivers State implies that firms effectively utilizing their existing resources and capabilities are more operationally efficient. This efficiency enhances their ability to quickly respond to market changes and demands, maintaining a competitive edge. Thus, while exploration drives innovation, exploitation of current strengths ensures these firms remain agile and responsive, contributing to overall operational success. This agrees withAmah &Onwughalu (2017) that ambidexterity relates positively and significantly with organizational resilience among telecommunication firms in Port Harcourt, Rivers State. It also conforms withAdamu and Onuoha (2023). that corporate innovation relates significantly with organizational ambidexterity in manufacturing firms located in Rivers State.

Conclusion

The study on organizational ambidexterity and agility of manufacturing firms in Rivers State sheds light on the intricate connections between exploration, exploitation, and the dimensions of alertness and responsive capability. Firstly, it highlights a positive correlation between exploration and both alertness and responsive capability within these firms. This suggests that firms engaging in exploration activities are more attuned to market trends and possess the capability to swiftly respond to changes. Secondly, the study underscores a similar positive correlation between exploitation and alertness, as well as responsive capability. This indicates that firm's adept at exploiting their existing resources and capabilities demonstrate heightened alertness and responsiveness, contributing to their overall agility. Overall, these findings emphasize the importance of balancing exploration and exploitation strategies to enhance organizational ambidexterity and foster agility in manufacturing

firms operating in Rivers State. Such insights are crucial for firms aiming to navigate dynamic market landscapes effectively and sustain competitiveness in the long term.

Recommendations

- 1. Managers in manufacturing firms in Rivers State should engage in exploration of new market opportunities and at the same time, exploitation of existing skills and capabilities in order to remain competitively advantageous in the competitive business environment
- 2. Managers in manufacturing firms in Rivers State should be on the alert to move quickly and also have the capacity to think and understand quickly the trends in the business environment and be quick in solving the problems, adapt quickly to the changing environment and make rapid and strategic decisions.
- 3. Managers in manufacturing firms in Rivers State should strive to engage in responsive capability in order to be prompt in detecting and interpreting the significant environmental changes.
- 4. Managers in manufacturing firms should build responsive capacity to quickly and efficiently react o changes, opportunities and threats in the dynamic environment, and as well be inclined in exploitative strategyfor maximisation of efficiency and existing resources, capabilities and knowledge

References

- Adamu, M. M., & Onuoha, B. C. (2023). Corporate innovations and organizational ambidexterity of manufacturing firms in rivers State. *International Academy Journal of Management Annals*. 8(5), 1-16. DOI: 2721425621851
- Adeniran, T. V., & Aremu, M. A. (2021). Strategic flexibility and organizational performance: A study of manufacturing firms in Nigeria. International *Journal of Management and Commerce Innovations*, 9(1), 45-58.
- Amah, E., &Onwughalu, O. O. (2017). Ambidexterity and organizational resilience of telecommunication firms in Port Harcourt, Rivers State. *Archives of Business Research*, 5(11).http://dx.doi.org/10.14738/abr.511.3821
- Anekwe, R, Gunardi, A., & Ifeanyichukwu, N. (2020). Ambidexterity and organizational performance of manufacturing firms in Enugu State, Nigeria. *IOSR Journal of Business and Management* (*IOSR-JBM*) 22(6, Ser. I), 21-26. http://dx.doi.org/10.9790/487X-2206012126
- Baden-Fuller, C., &Mangematin, V. (2013). Business models: A challenging agenda. Strategic Organization, 11(4), 418-427.
- Briody, E. K., Meer, D., & Trotter, R. T. (2022). Driving employee engagement through organizational agility. *Journal of Organizational Behavior*, 43(2), 293-309.
- Chen, J., Sun, Y., & Zhou, T. (2020). Enhancing manufacturing competitiveness in China: The roles of human resource management practices and employee outcomes. *Sustainability*, *12*(8), 3179.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152.
- Dove, R. (2022). Agile Manufacturing: The 21st Century Competitive Strategy. International Journal of Production Economics, 140(2), 559-572.
- Doz, Y. L., & Kosonen, M. (2021). Fast strategy: how strategic agility will help you stay ahead of the game. *Long Range Planning*, *54*(4), 102062.
- Dyer, L., & Ericksen, J. (2021). The agile organization: How to build an innovative, sustainable and resilient business. *Journal of Business Strategy*, 42(1), 23-30.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10-11), 1105–1121.
- Emeana, F. C., & Onuoha, B. C. (2023). Structural ambidexterity and performance of manufacturing firms in Rivers State, Nigeria. *Academia Networks International Journal of Management & Finance*, 8(4): 19-35.DOI: 260455261521842
- Garud, R., & Karnøe, P. (2003). Bricolage versus Breakthrough: Distributed and Embedded Agency in Technology Entrepreneurship. *Research Policy*, 32(2), 277–300.
- Garud, R., & Karnøe, P. (2003). Bricolage versus breakthrough: distributed and embedded agency in technology entrepreneurship. *Research Policy*, 32(2), 277–300.

- Gibson, C. B., & Birkinshaw, J. (2020). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 62(4), 1081-1103.
- Goldstein, S., & Naglieri, J. A. (2011). Handbook of executive functioning. Springer.
- He, Y., & Wei, Z. (2020). How does ambidexterity affect organizational performance? The roles of exploration, exploitation, and environmental dynamism. Journal of Business Research, 112, 166-176.
- Helfat, C. E., &Peteraf, M. A. (2003). The dynamic resource-Based view: *Capability Lifecycles*. *Strategic Management Journal*, 24(10), 997–1010.
- Huang, L., Zhang, Q., Liu, Z., & Lin, Z. (2024). Ambidextrous innovation and firm performance: The mediating role of organizational learning capability. *Journal of Technology Transfer*, 49(2), 306-327.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2021). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 64(6), 1759-1787.
- Johnston, D. A., McCutcheon, D. M., & Stuart, F. I. (2023). Agility, supply chain flexibility, and competitive performance in volatile environments. *International Journal of Operations & Production Management*, 43(7), 782-802.
- Li, Y., & Ai, Z. (2021). Supply chain disruption management under competition. International Journal of Production Economics, 237, 108259.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87.
- McArdle, W. D., Katch, F. I., & Katch, V. L. (2010). Exercise physiology: Nutrition, energy, and human performance. Lippincott Williams & Wilkins.
- Omotayo, F. O., Awodele, A., & Olamide, O. (2020). Organizational agility and firm performance: Empirical evidence from the Nigerian manufacturing industry. *Journal of Business and Management*, 22(3), 29-40.
- Osabutey, E. L., & Jin, Z. (2022). The role of organizational ambidexterity in responding to market changes: Evidence from the manufacturing sector in sub-Saharan Africa. African Journal of Economic and Management Studies, 13(2), 184-202.
- Raisch, S., & Birkinshaw, J. (2021). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 41, 69-88.
- Raisch, S., & Birkinshaw, J. (2021). Organizational Ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, 47(3), 585-615.
- Sherehiy, B., & Karwowski, W. (2020). The relationship between work organization and workforce agility in manufacturing. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 30(2), 76-89.

- Tallon, P. P., Queiroz, M., Coltman, T., & Sharma, R. (2023). Information technology and the dynamics of organizational agility: Insights from a systematic literature review. *Journal of Strategic Information Systems*, 32(1), 101683.
- Tang, J., Tang, Z., & Marino, L. (2020). Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, 35(3), 105939.
- Teece, D. J. (2022). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm. *European Economic Review*, 150, 103141.
- Teece, D. J., Peteraf, M., & Leih, S. (2022). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 64(1), 41-70.
- Tushman, M. L., & O'Reilly III, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, *38*(4), 8–30.
- Wang, L., & Huang, H. (2022). The impact of organizational ambidexterity on firm performance: The mediating role of dynamic Capabilities. *Sustainability*, *14*(1), 231.
- Wu, W., Deng, X., & Zhai, Y. (2022). Digital transformation and manufacturing firms' agility: the mediating role of dynamic capabilities. *International Journal of Production Research*, 1-15.
- Yusuf, Y. Y., Gunasekaran, A., & Musa, A. (2021). Achieving agility in supply chain through concurrent engineering: A case study of an electronics firm. *International Journal of Production Economics*, 150, 89-99.
- Zhang, S., Wu, Z., & Xiao, J. (2023). Can organizational ambidexterity reduce the negative effect of high-performance work systems on employee creativity? The moderating role of workplace ostracism. *Journal of Business Research*, 141, 330-339.